

Atty. Dkt. No. 073442-0301

Amendments to the Claims/Listing of Claims:

Please amend claims 1, 3, 10-11, 18, and 25-27, and cancel claims 1 and 3 as follows.
This **Listing of Claims** will replace all prior versions, and listings, of claims in the application.

1.-9. (Canceled)

10. (Previously presented) A eukaryotic expression vector comprising a recombinant nucleic acid sequence encoding thiaminase I from *N. gruberi*.

11. (Previously presented) A vector comprising a recombinant nucleic acid sequence encoding thiaminase I from *N. gruberi*.

12.-15. (Canceled)

16. (Withdrawn) An isolated, purified, or enriched thiaminase or derivative, wherein said thiaminase is not a *Bacillus thiaminolyticus* thiaminase.

17. (Withdrawn) The thiaminase or derivative of claim 16, wherein said thiaminase or derivative is a homolog of a *Naegleria gruberi* thiaminase or derivative.

18. (Currently amended) A purified, enriched, or isolated nucleic acid sequence encoding thiaminase I from *N. gruberi*, wherein said nucleic acid sequence is at least 90% identical to ~~an equal length sequence at least 200 nucleotides in length~~ a portion of the *N. gruberi* thiaminase sequence of SEQ ID NO. 3 at least 200 nucleotides in length.

19. (Previously presented) The nucleic acid sequence of claim 18, wherein said nucleic acid sequence comprises a sequence at least 95% identical to the sequence of SEQ ID NO. 3.

Atty. Dkt. No. 073442-0301

20. (Withdrawn) A method for identifying a nucleic acid sequence coding for a thiaminase from a species different from *Naegleria gruberi* or *Bacillus thiaminolyticus*, comprising
identifying a nucleic acid sequence from said species that is homologous to a thiaminase sequence from *Naegleria gruberi* or *Bacillus thiaminolyticus*.

21. (Withdrawn) The method of claim 20, wherein said identifying comprises amplifying a nucleic acid sequence from said species using primers derived from *Naegleria gruberi* or *Bacillus thiaminolyticus*.

22. (Withdrawn) The method of claim 20, wherein said identifying comprises performing sequence comparisons in a sequence database to identify homologous sequences.

23. (Withdrawn) The method of claim 20, wherein said identifying comprises probing nucleic acid from said species with probes derived from *Naegleria gruberi* or *Bacillus thiaminolyticus*.

24. (Withdrawn) The method of claim 20, wherein said identifying comprises sequencing at least a portion of a thiaminase sequence isolated from said species; and
identifying a nucleic acid sequence from said species encoding said thiaminase sequence.

25. (Currently amended) A **non-pathogenic** bacterium selected from the group consisting of **avirulent** *C. sporogenes*[[,]] ATCC 8075, **avirulent** *C. beijerinckii*, and **attenuated non-pathogenic** *S. typhimurium*, **said bacterium** comprising a recombinant nucleic acid sequence encoding thiaminase I from *N. gruberi*.

26. (Currently amended) The bacterium of claim 25, wherein said bacterium is **avirulent** *C. sporogenes* ATCC 8075.

Atty. Dkt. No. 073442-0301

27. (Currently amended) The bacterium of claim 25, wherein said bacterium is attenuated non-pathogenic *S. typhimurium*.

28-31. (Cancelled)

32. (Currently amended) The bacterium of claim 25, wherein said bacterium is avirulent *C. beijerinckii*.